

ABSTRACT

A method and apparatus for spin forming a portion of a workpiece where the formed portion has a formed axis that
5 is non-coaxial with the non-processed axis of the workpiece includes at least two rollers rotatable about a spin axis. Each one of the rollers is axially and radially offset from the others. An axial drive mechanism reciprocates the rollers or workpiece to causes the first roller and then
10 the second roller to sequentially engage the workpiece. A pivoting mechanism rotates the rollers or workpiece about a pivot point from a first angular position to a second angular position during a forming operation to create a formed portion that is oblique to the non-processed portion
15 or is substantially curved. A higher reduction ratio is achieved which enables improved efficiency. The present invention reduces floor space requirements as the forming operation may be completed on a single machine.